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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

November 6, 1998

Ms. Magalie Roman Salas  
Secretary  
Federal Communications Commission  
1919 M Street, N.W.  
Washington, D.C. 20554

**Re: Ex Parte Notification of Next Level Communications  
CC Docket No. 98-147 – Deployment of Wireline Services  
Offering Advanced Telecommunications Capability**

Dear Ms. Salas:

Next Level Communications ("NLC") hereby notifies the Commission that on November 5, 1998, Frank Tuhy of NLC and NLC's attorneys Stephen Weiswasser, Gerard Waldron and Alane Weixel of Covington & Burling met with Commission staff to discuss issues in the above-referenced proceeding. Also present at the meeting were Jonathan Askin, Jason Oxman and Daniel Shiman of the Policy and Program Planning Division; Stagg Newman of the Office of Engineering and Technology; Johnson Garrett of the Office of Plans and Policy; and Jennifer Fabian of the Policy Division.

At the meeting, NLC discussed its state-of-the-art VDSL system – the NLevel<sup>3</sup> system. NLC explained that its NLevel<sup>3</sup> system solves the problem of the "last mile" by allowing incumbent local exchange carriers and cable operators to deliver voice, video, high-speed data, and high-speed Internet access over twisted copper loops. NLC distributed the attached documents and referred to these materials in explaining how the NLevel<sup>3</sup> system operates. In response to questions from Commission staff, NLC discussed spectrum compatibility issues and identification of interconnection points for competitive carriers on xDSL systems such as the NLevel<sup>3</sup> system.

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Ms. Magalie Roman Salas  
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Please address any questions to the undersigned.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Gerard J. Waldron". The signature is fluid and cursive, with a long horizontal stroke at the end.

Gerard J. Waldron  
*Attorney for Next Level Communications*

cc: Jonathan Askin, Esq.  
Jennifer Fabian  
Johnson Garrett  
Stagg Newman  
Jason Oxman, Esq.  
Daniel Shiman

## **NEXT LEVEL COMMUNICATIONS DESCRIPTION OF THE NLevel<sup>3</sup> SYSTEM**

The Next Level Communications ("NLC") system is comprised of a "Broadband Digital Terminal" ("BDT") which is located in a central office or central wire center. Each BDT serves approximately 2000 customers. The BDT is a full-service multiplexer and connects both to a LEC's narrowband Public Switched Telephone Network ("PSTN") and broadband Asynchronous Transfer Mode ("ATM") network. The Broadband Digital Terminal also supports two management systems provided by NLC. One system acts as a traditional operator support system and provides monitoring, alarm reporting and other administrative functions for the NLevel<sup>3</sup> system. The other is a broadband service management system that controls which customers are authorized to receive which video programming services.

The NLevel<sup>3</sup> system can be deployed in either a fiber-to-the-curb ("FTTC") or a fiber-to-the-node architecture ("FTTN"). In a FTTC system, a Broadband Network Unit ("BNU") is placed at a curbside location (including a telephone pole, pedestal or buried area) which is a few hundred feet from the subscriber's home. For down-stream traffic, the BNU is a de-multiplexer that takes a single bit stream coming into it and splits it apart into different services, including voice, data, Internet access and video. The Broadband Network Unit then routes the services to the appropriate customer. For up-stream traffic, the BNU serves as a multiplexer. A BNU typically serves 8 to 16 customers. (Figure 1 demonstrates this fiber-to-the-curb architecture.)

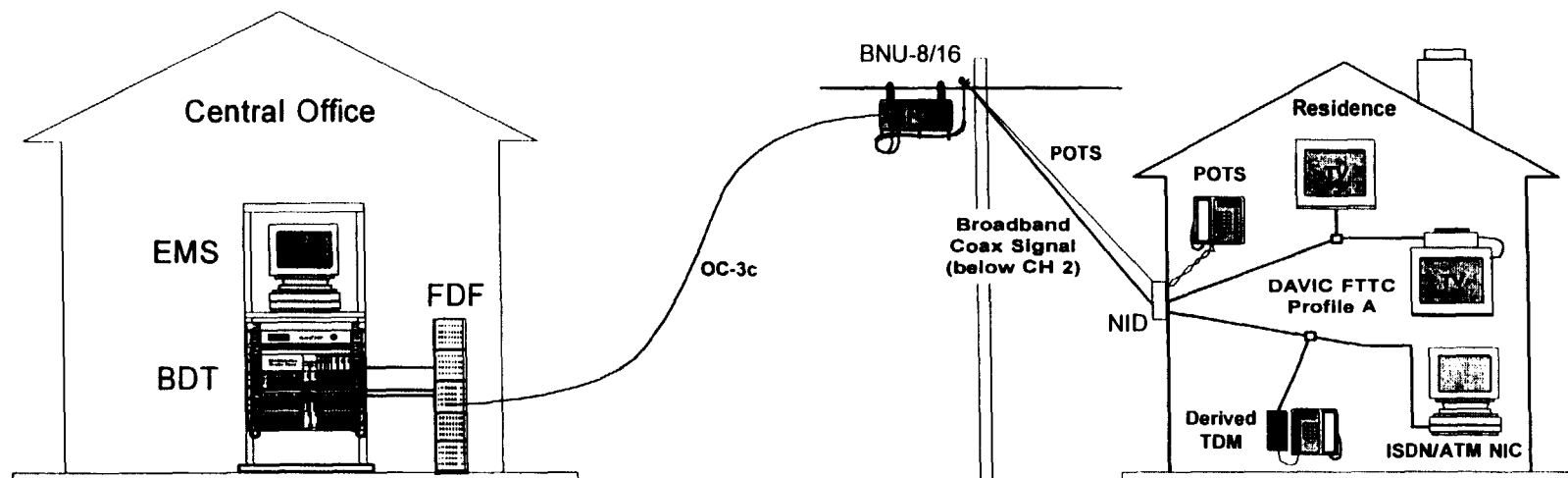
In a fiber-to-the-node architecture, a Universal Service Access Multiplexer ("USAM") is placed at the serving area interface, where the fiber feeder lines meet the copper distribution lines. The USAM performs the same functions as the Broadband Network Unit and

provides the same array of services – voice, data, Internet access and video. The primary difference is that Universal Service Access Multiplexers can be placed further from the residence than Broadband Network Units. USAMs can serve up to 96 POTS lines. (Figure 2 demonstrates the fiber-to-the-node architecture.)

The consumer interface consists of a single set top box in the consumer's home – called the "residential gateway" – that provides access to telephone, video programming, high-speed data, and Internet access services. An additional network interface installed outside the home and invisible to the consumer connects the house to the network. As described above, the NLevel<sup>3</sup> system allows a consumer to enjoy three separate video streams (that is to say, three separate televisions exhibiting different programs), voice service, and high-speed data service, all at the same time. The NLevel<sup>3</sup> system utilizes internal wiring to the greatest extent possible, so that separate set top boxes are not necessary. The network interface works on a standard Ethernet connection, and a consumer can connect directly to the Internet through an ISP in the same fashion as a dial-up modem connection via conventional phone lines.

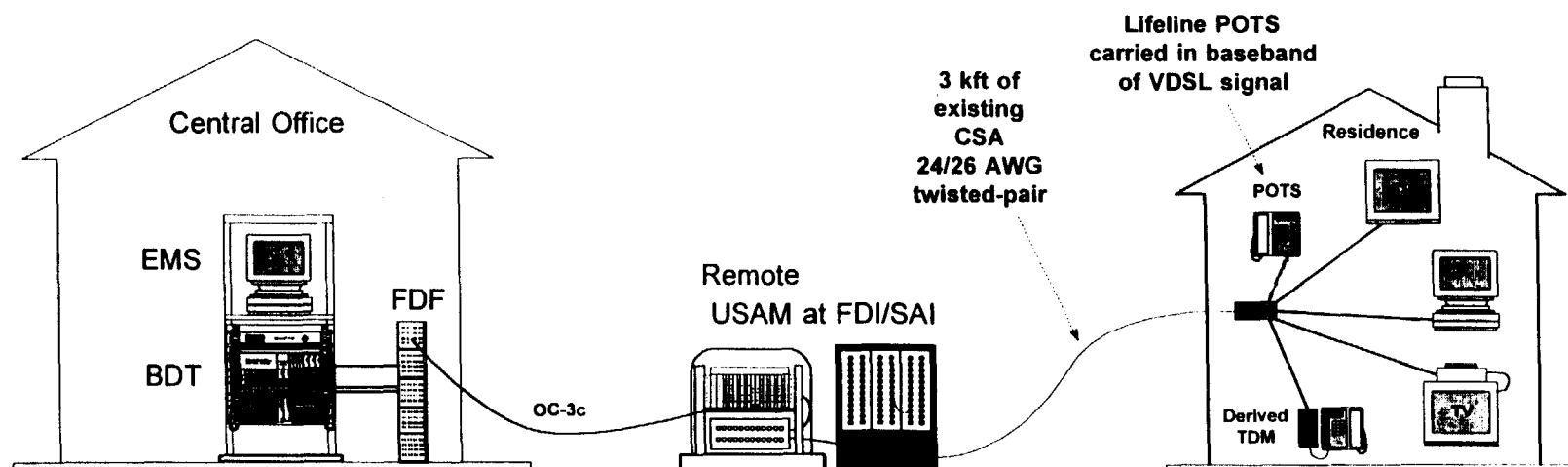
**In sum, the NLevel<sup>3</sup> system allows incumbent LECs *and other entities* with access to the incumbent LECs' local loops to provide the full array of advanced services – including video – without replacing the existing narrowband network or building a second broadband network. With the NLevel<sup>3</sup> system, incumbent LECs can become viable competitors to incumbent cable operators without having to install coaxial cable or additional fiber.**

# New Growth/Rehab Using FTTC



- Brings a *single* fiber to 8 or 16 home level (BNU-8 or BNU-16)
- Cost parity with existing DLCs – a key design goal and ideal new growth telephony-first strategies, with low incremental broadband upgrade cost
- Compact BNU (<60 lbs.) can be wall, pole, strand or pedestal mounted
- Packaging aimed at installation time and cost reduction

# VDSL Overlay for Full Service Support



- For full service network applications, with multiple devices per home supported, VDSL can be provided from a USAM at the FDI/SAI (if FDI/SAI is less than 4000 ft from subscriber)
- Point-to-point VDSL drop terminated in a Residential Gateway which provides home network interfaces without the need for multiple Digital STBs